

### **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions and listings of claims in the application:

1. - 27. (Cancelled)

28. (Currently Amended) A method of embolizing a blood vessel or vascular malformation, comprising:

blocking blood flow in a blood vessel;

administering to the blood vessel or vascular malformation ~~at or downstream from the blocked blood flow~~ a composition comprising a nucleophilic component including pentaerythritol-tetrakis(3-mercaptopropionate) (QT) and a component containing a conjugated unsaturated bond including poly(propylene glycol)diacrylate; and

crosslinking, within the blood vessel or vascular malformation, the nucleophilic component with the component containing a conjugated unsaturated bond so as to form a crosslinked emboli and occlude the blood vessel or vascular malformation.

29.-38. (Cancelled)

39. (Original) The method of claim 28 wherein the composition further comprises a buffer solution.

40. (Original) The method of claim 28 wherein the composition further comprises a surfactant.

41. (Original) The method of claim 28 wherein the composition further comprises a base.

42. (Original) The method of claim 28 wherein the composition gels within the blood vessel within 30 minutes of introduction.

43. (Original) The method of claim 28 wherein the composition gels within the blood

vessel within 15 minutes of introduction.

44. (Original) The method of claim 28 wherein the composition further comprises at least one additional agent selected from the group consisting of radiopaque agents and nonsteroidal anti-inflammatory compounds.

45. (Original) The method of claim 31 further comprising a second thiole precursor.

46. (Original) The method of claim 45 wherein the second thiole precursor is dithiothreitol (DTT).

47. (Previously Presented) The method of claim 29 wherein the component containing a conjugated unsaturated bond consists of polypropylene glycol diacrylate (PPODA).

48. (Previously Presented) The method of claim 29 wherein the component containing a conjugated unsaturated bond further includes polyethylene glycol diacrylate (PEGDA).

49. (Previously Presented) The method of claim 29 wherein the component containing a conjugated unsaturated bond further includes pentaerythritol triacrylate (TA).

50. (Original) The method of claim 39 wherein the buffer is a phosphate buffer.

51. (Previously Presented) The method of claim 41 wherein the base is NaOH.

52. (Currently Amended) The method according to claim 28 further comprising increasing the pH of the composition prior to introducing the composition into the reproductive duct.

53. (Original) The method according to claim 28 wherein the composition is introduced into the blood vessel through a catheter.

54. (Original) The method according to claim 53 wherein the catheter is a balloon catheter.

55. (Previously Presented) The method according to claim 28 wherein the blood vessel for embolization has an arteriovenous malformation.